

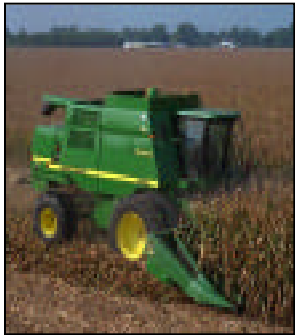
*Supply Chain Management
at
John Deere*

Art Rowe

*Project Manager, Supply Management Human Resources
Worldwide Supply Management
Deere & Company*

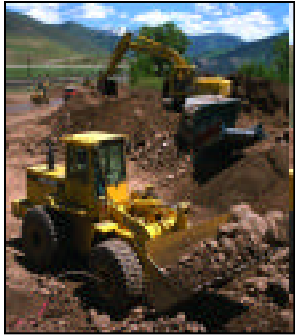


JOHN DEERE



John Deere Businesses

- Equipment Operations
 - Agricultural
 - Construction and Forestry
 - Commercial & Consumer
 - Power Systems: engines, transmissions
 - Parts: 300,000 service parts



John Deere Businesses

- Financial Services
 - Credit-financing and leasing
 - Health care: managed health care for 1,400 companies



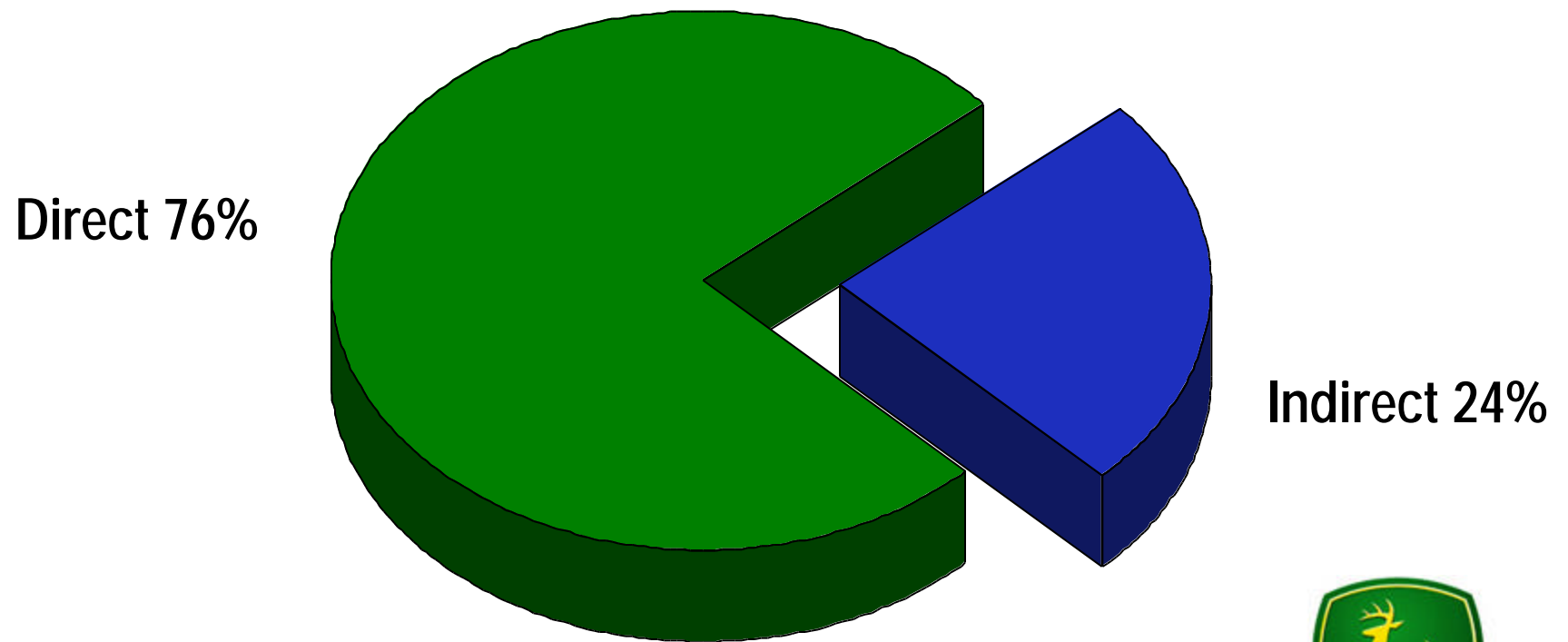
John Deere: Who We Are

- 39,000 employees
- More than 14,000 active suppliers
 - \$7 billion in global purchases
 - 70% of manufacturing costs



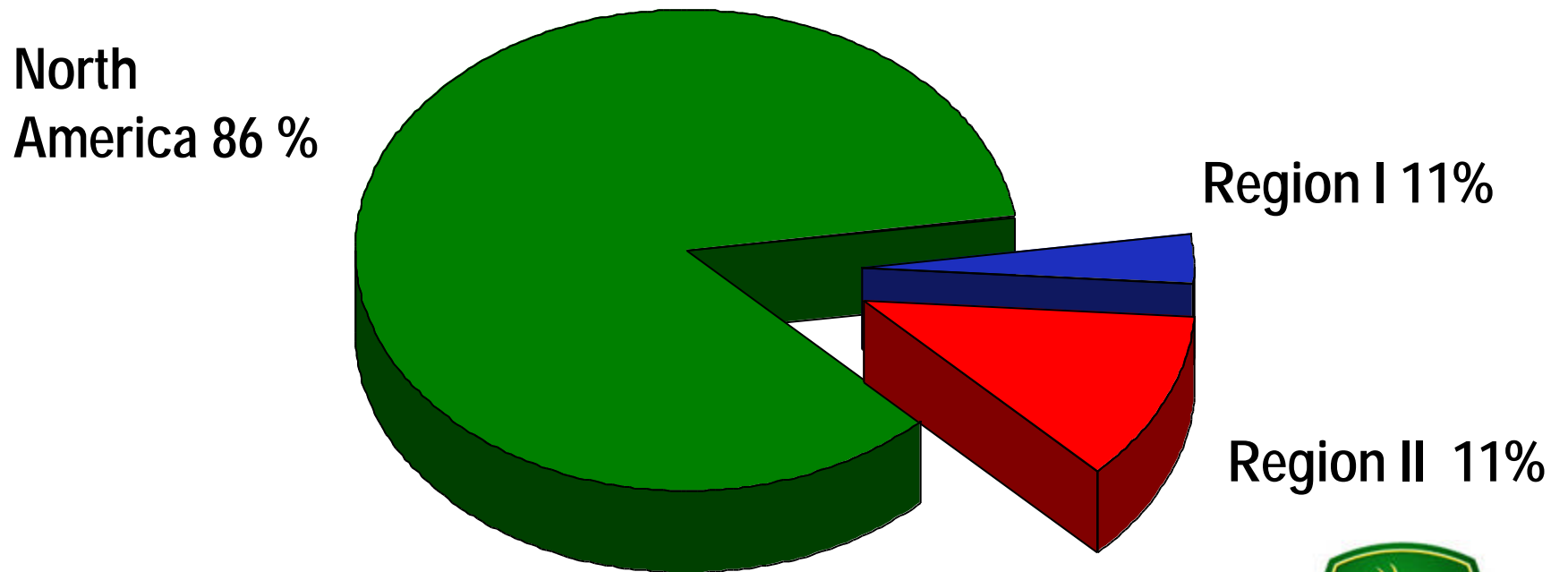
JOHN DEERE

Global Purchases \$7.1 Billion



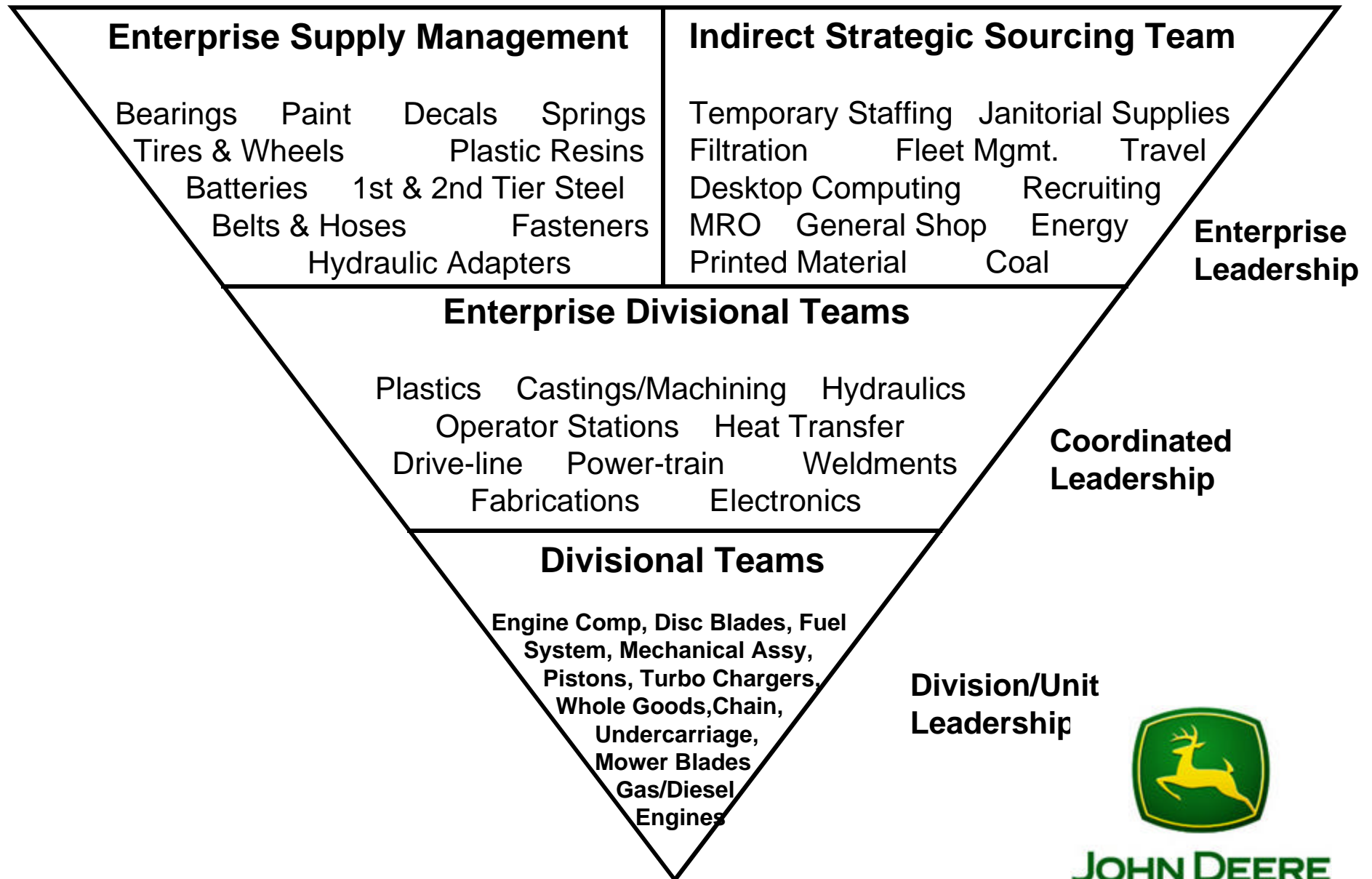
JOHN DEERE

Global Purchases \$7.1 Billion



JOHN DEERE

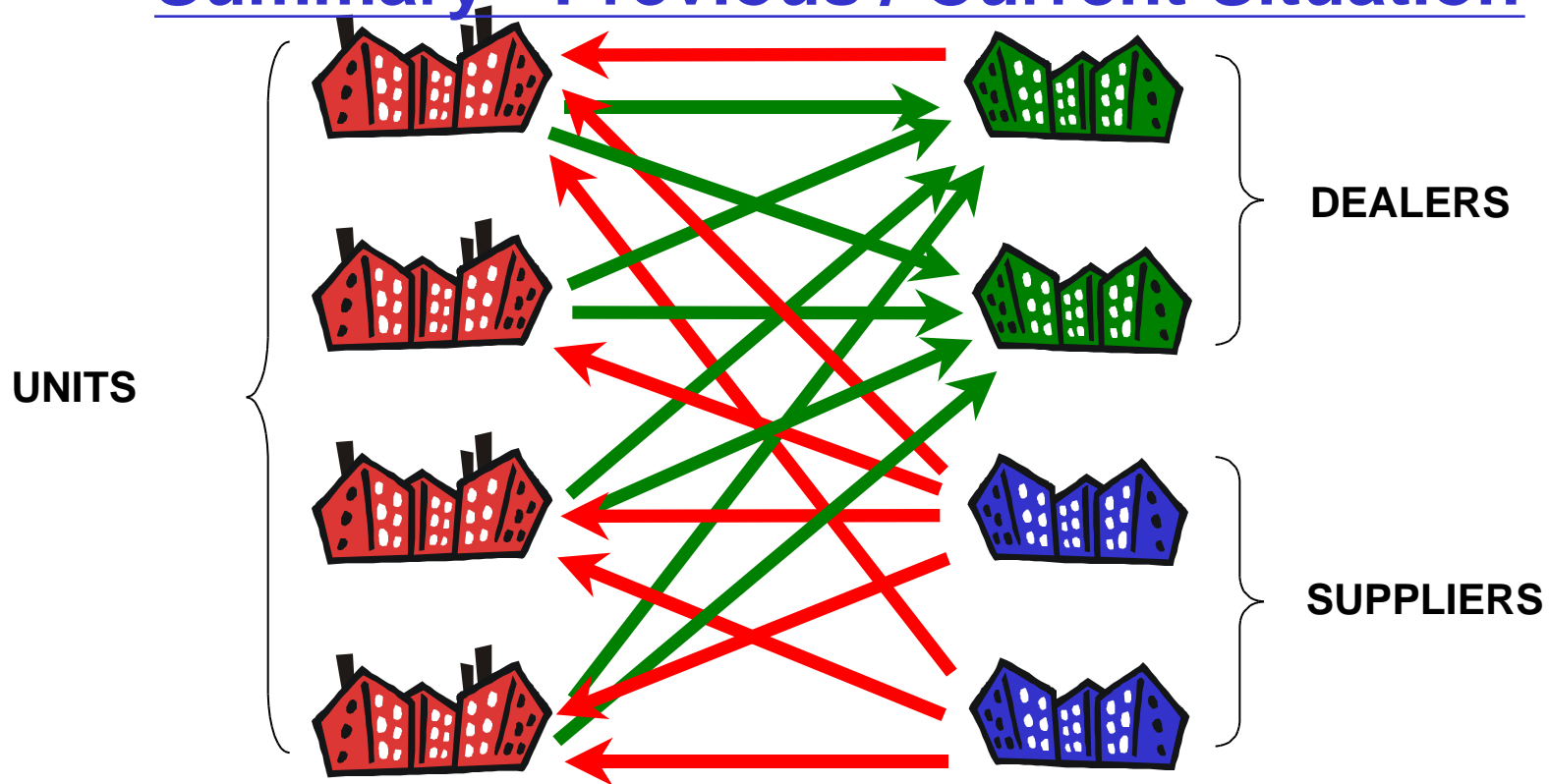
Enterprise / Division Supply Management



JOHN DEERE

Logistics Network Analysis

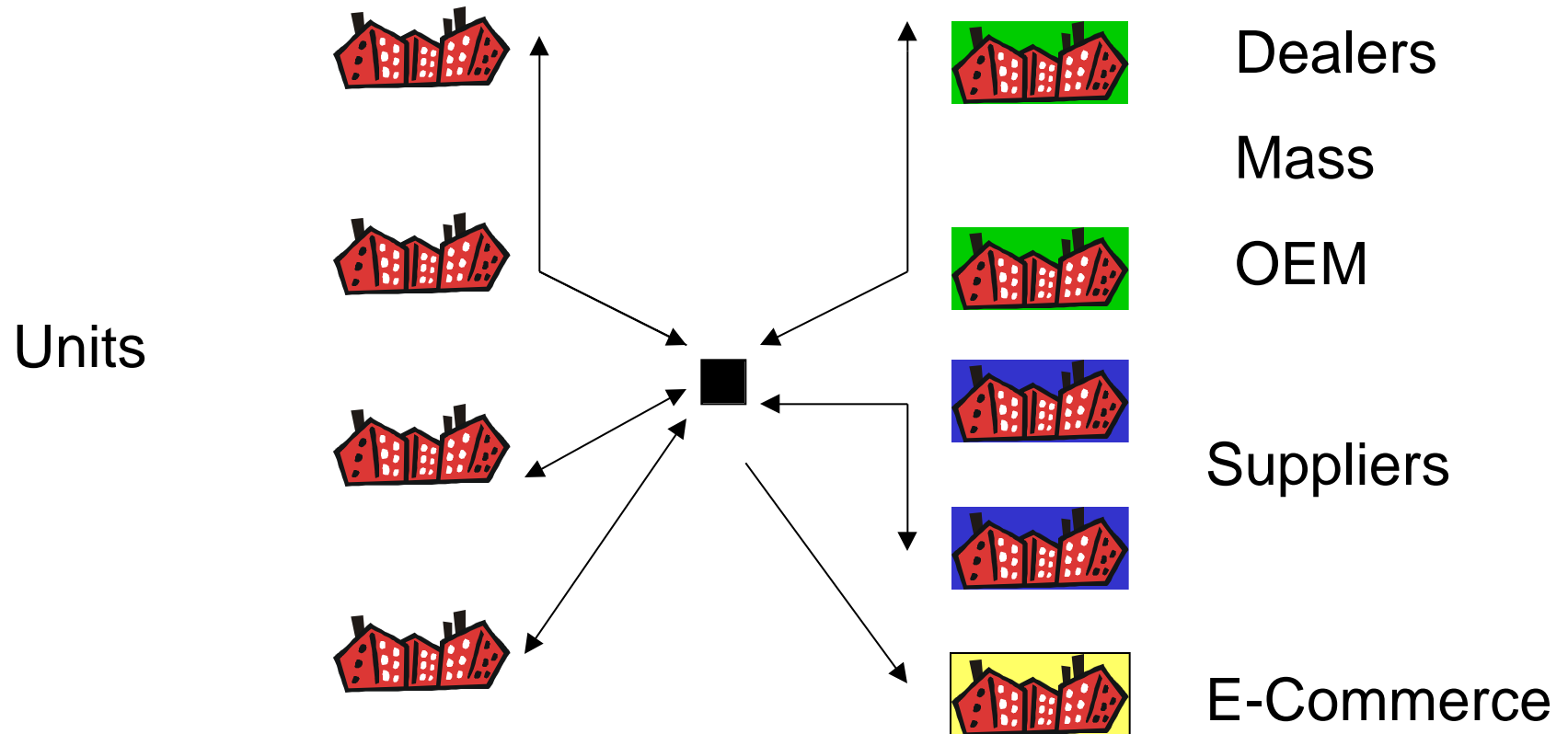
Summary - Previous / Current Situation



JOHN DEERE

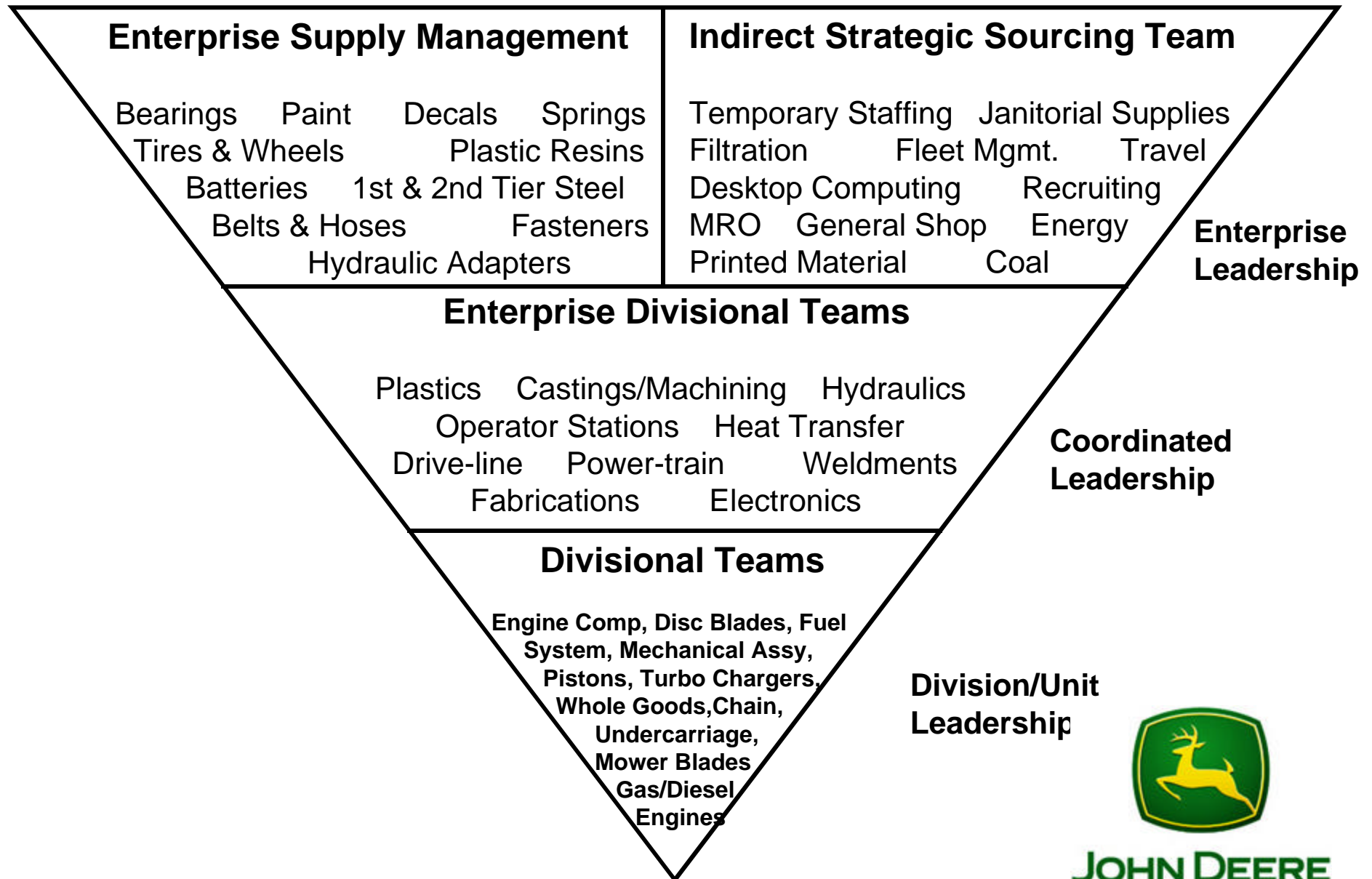
Logistics Network Analysis

Summary - Logistics Service Centers



Full integration of Inbound and Outbound to maximize leverage for cost efficiency and timed defined delivery

Enterprise / Division Supply Management



JOHN DEERE

Supply Management Strategies

- Supply Chain Design
- Supply Chain Integration
- e-Business
- Workforce Excellence
- Innovation and Growth



JOHN DEERE

Supply Chain Design Initiatives

- Strategic Sourcing
- Cost Management
- Supplier Development
- Achieving Excellence
- Logistics Network
- Supplier Diversity



JOHN DEERE

Supply Chain Integraton Initiatives

- Institutionalize Roadmap
- Technology and Product
Delivery Process Integration
- Order Fulfillment - Production
Planning
- Order Fulfillment - Customer
Support / Logistics



JOHN DEERE

Integration Roadmap

	<i>All Teams</i>	PDP Phase	Advanced R&D	Product Plan	Concept Phase	Design & Verification	Transition to Production	Continuous Improvement
	<i>Activity</i>							
2	Coordinate Supplier and Deere PDPs		X	X				
3	Review the Supplier Quality Manual (SQM) with Suppliers		X	X				
4	Deere and Supplier Share Strategic Plans		X	X				X
5	Finite Element Analysis (FEA) to Verify Supplier Designs		X	X	X			
6	Electronic Data Exchange		X	X	X	X		
7	Confidentiality Agreement		X	X	X			X
8	Exclusivity Agreement		X	X	X			X
9	Deere Design Team Person at the Supplier During Prototype Build		X		X	X		
10	Share Best Practices -- PDP & OFP		X	X	X		X	X
11	Supplier and Deere Co-Manage Project		X	X	X	X	X	
12	Supplier Development		X	X	X	X	X	X
13	Communication with Suppliers		X	X	X	X	X	X

E-Business Initiatives

- Procurement / B2B
- Sourcing
- Technology and Product Delivery
Process Integration
- Customer Support
- Order Fulfillment / GTTC
- Information Management and
Communications



Workforce Excellence Initiatives

- Recruit the Best
- Global Training
- Grow Leadership Candidates
- Employee Performance Goals
- Career Development
- Employee Retention



JOHN DEERE

Innovation and Growth Initiatives

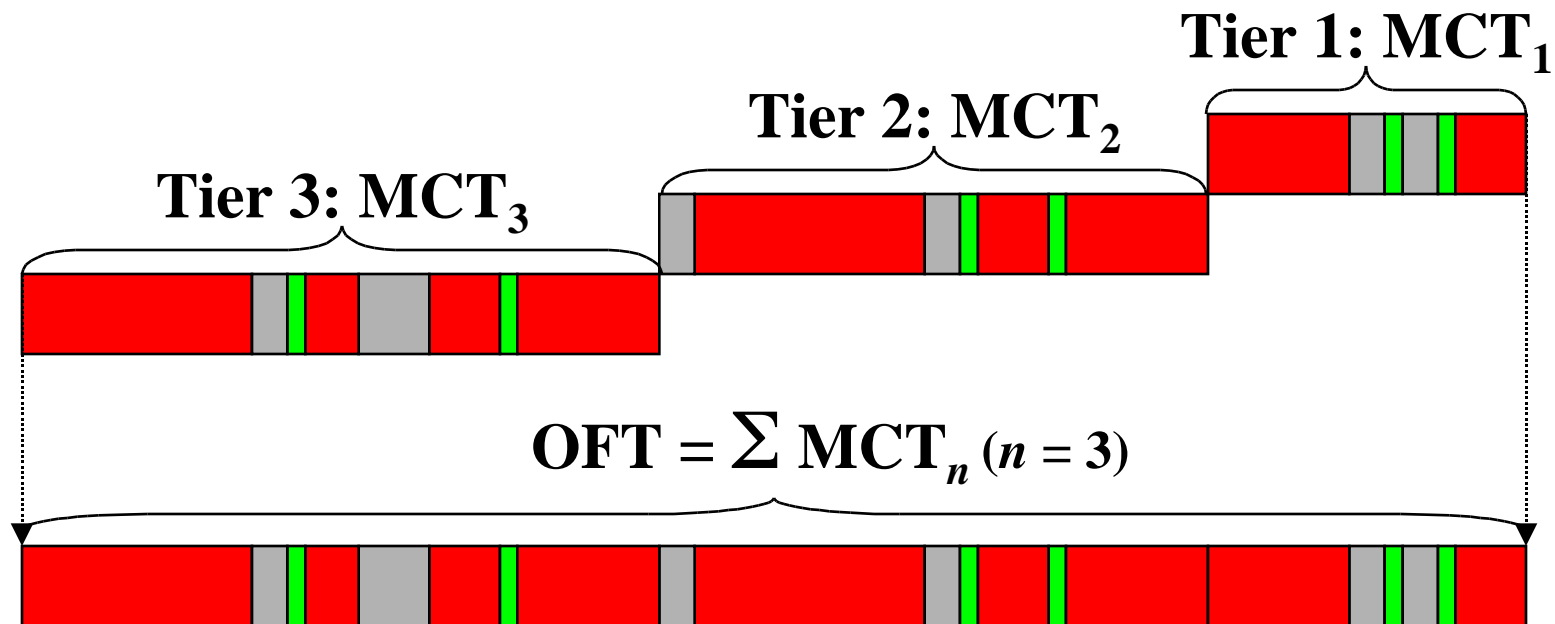
- Global Supplier Network
- Web Services
- Distance Learning
- Supply Chain Marketplace
- Mergers & Acquisitions



JOHN DEERE

Order Fulfillment Time

Order Fulfillment Time (OFT) = $\sum^n \text{MCT for Tier } n$



Manufacturing Cycle Time

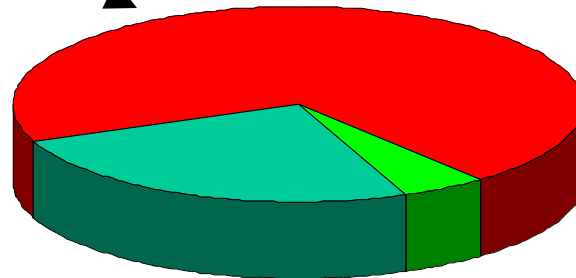
Process Mapping:
Manufacturing Cycle Time



Value Ratio Analysis

**Cost Reduction
Opportunities**

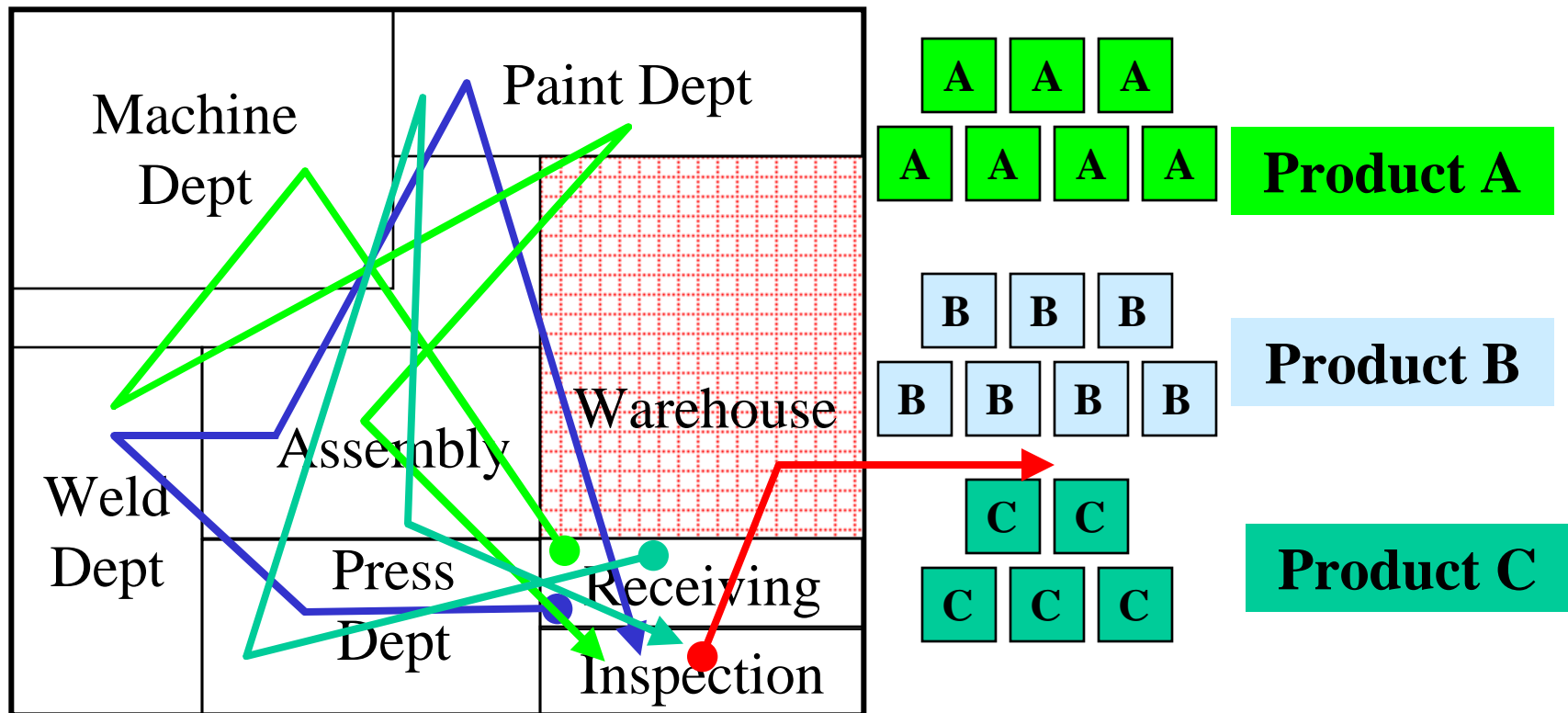
- Value Adding
- Non value - Required
- Non value - Unnecessary



Supplier Operations

On-Time Delivery

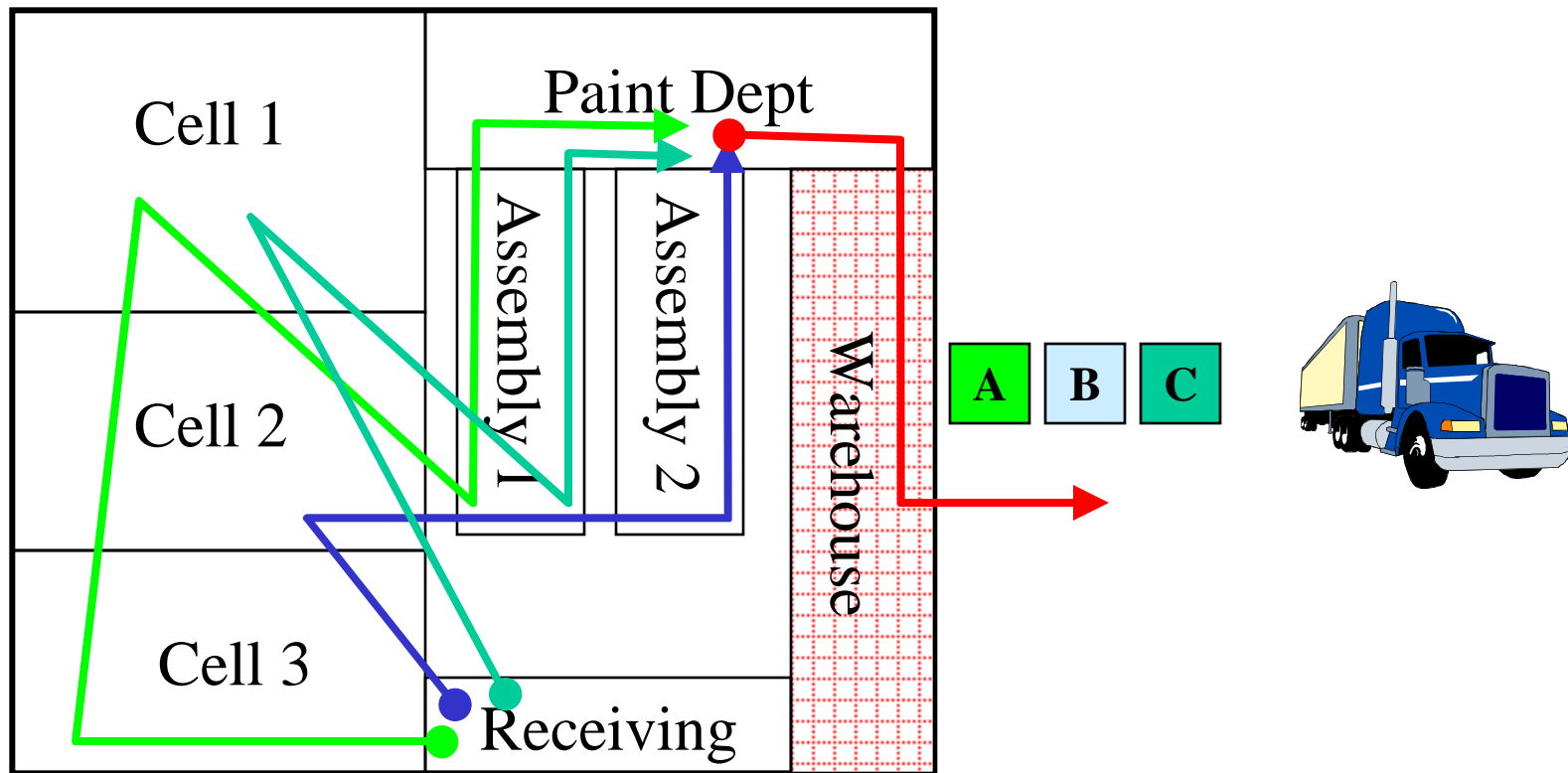
Achieved by Shipping from Finished Goods Inventory



Supplier Operations

On Time Delivery

Achieved through Flexible/ Predictable Manufacturing



Results from Completed Projects

FAI Project Scorecard

STX/LT Wiring Harness Cell

Cycle Time (days): 32 to 2

Return On Investment:

- Man Days Invested -- 34
- Annual Price Reduction -- \$77K
- Price Reduction/Man Day -- \$2,279



JOHN DEERE

Results from Completed Projects

Fargo, PA Project Scorecard

E.O.005 Wiring Harness Cell (complete)

Cycle Time (days): 17 to 3

Return On Investment:

- Man Days Invested -- 11
- Annual Price Reduction -- \$137K
- Price Reduction/Man Day -- \$12,495



JOHN DEERE

Supplier Training

JD Supply Network - Resources - Education - Illinois - Course Descriptions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ILLINOIS INDUSTRIAL TRAINING PROGRAM CLASS OFFERINGS

Achieving Excellence - Direct	Inventory Management
Achieving Excellence - Indirect	ISO 14001 Internal Auditing
Activity Based Costing (ABC) Application	ISO 14001 Intro & Documentation
Activity Based Costing (ABC) Introduction	ISO 9000 Y2K Revisions
Advanced Product Quality Planning	ISO 9000 Internal Auditor/Team Training
Apples & Oranges	ISO/QS-9000 Quality System Documentation
Basic Blueprint Reading	JD Crop
Business Ethics & Back Door Selling	Job Instruction Workshop
Cell Manufacturing	Leadership Bootcamp
Computer Numeric Control Programming	Leadership Skills
Computer Skills	Lean Manufacturing
Conflict Resolution Team Operating Skills	Listen Really Listen
Continuous Process Improvement - Quickstart	Managing The Supply Chain
Continuous Process Improvement for Shop Floor	Measurement Systems Analysis
Continuous Process Improvement for Workplace	Mistake Proofing
Continuous Quality Improvement	Operational Finance for Non-Financial Staff
Cost Management Target Based	Presentation Skills
Cost/Price Analysis	Process Mapping
Creating More Effective Meetings	Project Management for Work Groups
Cycle Time Reduction	Quick Response Manufacturing
Decision Focus	Quote Form Analysis For Suppliers
Design of Experiments for Non-Statisticians	Respect vs. Harrassment - Employee
Developing Communication for Increased Collaboration	Respect vs. Harrassment - Managers
Developing High Performance Teams	Root Cause Analysis
Documenting The Value You Add	Setup Reduction
EDI (Supply Management)	Statistical Process Control Methods
Effective Facilitation	Strategic Sourcing Process for Team Members
Effective Job Skills	Stress Management
Failure Mode and Effects Analysis (FMEA)	Team Focus
Geometric Dimensioning & Tolerancing	Team Problem Solving Skills
Group Problem Solving	Time Management

http://www.90.deere.com/suppmgmt/resources/education/illinois/iclasses/isoqsdoc.htm Local intranet

Supply Management Training

JD Supply Network - Resources - Education - Supply Management - Course Descriptions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

[Resources](#): [Education](#): [Supply Management](#): [Course Descriptions](#):

SUPPLY MANAGEMENT CLASS OFFERINGS

Achieving Excellence - Direct Materials	Global Supply Management/International Purchasing
Achieving Excellence - Indirect Materials & Services	Impact Basics
Advanced EDI	Integrating the Supply Chain
Advanced Legal Aspects of Purchasing	International Purchasing Workshop
Analytical Purchasing Workshop	JD CROP
Analyzing International Financial Statements	Job Instruction Workshop
Apples and Oranges (Business Simulation)	Legal Aspects of Buying Services
Advanced Product Quality Planning	Legal Aspects of Purchasing for the Non-Purchasing
Advance Ship Notice (ASN)	Team Member
Back Door Selling	Legal Aspects of Purchasing - Nahabit & Associates
Boise Cascade Internet Training	Legal Aspects of Purchasing
Business Ethics	Managing the Cost of the Supply Chain
CAPS Work Queue	Managing the Supply Chain
Cash Flow Analysis	Mistake Proofing
Continuous Quality Improvement	Negotiating Overseas
Cost/Price Analysis	Negotiation & Relationship Management
C.P.M./A.P.P. Review Workshop	Overhead Allocation
C.P.M./A.P.P. Review (Module 1)	Presentation Skills
C.P.M. Review (Module 2 & 3)	Process Mapping
C.P.M./A.P.P. Review (Module 4)	Project Management for Workgroups
CPS Fundamentals	Quality Primer
CPS GRNREQ	Quick Response Manufacturing
CPS - POP/Online Screen	Quote Form Analysis
CPS Quotes	Root Cause Analysis
Contract: Reading, Writing, & Negotiating - Nahabit & Associates	Small Disadvantaged Supplier Program
Customer Service: A Strategy for the Future	Statistical Quality Control
Customer Service II	Strategic Sourcing Process for Team Members
	Stress Management

Local intranet

Supply Management MBA Program

- Joint program with Arizona State University
- 35 Participants in Initial Cohort
- Begin September 2000; Graduate May 2002 with a MBA in Supply Management



JOHN DEERE



AE Key Concepts

- ▼ Strong supplier relationships
- ▼ Well-defined performance expectations
- ▼ Measured performance and feedback
- ▼ Support strategic sourcing



JOHN DEERE

AE Performance Categories



- Quality
- Delivery
- Cost Management
- Technical Support
- Wavelength



JOHN DEERE

JD CROP Key Concepts

John Deere Cost Reduction Opportunities Process

Engage, capture, and communicate
supplier efforts in cost reduction



JOHN DEERE

AE Performance Categories



- Quality
- Delivery
- Cost Management
- Technical Support
- Wavelength



JOHN DEERE

Achieving Excellence



Fiscal Year to Date Summary

Thursday, 09-Sep-1999 07:47:14 CDT

[Help](#)

Select a page ...

Displays the Fiscal Year to Date summary for a supplier across all John Deere units.

Supplier: 0055571
SUPPLIER NO FOR TESTING

Messages: Inquiry Successful ?

Fiscal Year to Date Summary

Unit	Quality PPM	Delivery PPM	% Delivery Conformance	Cost Index	Percent Dollars Included	Receipt Dollars	Supplied Pieces	Quality NonCF Pieces	Receipt Pieces	Delivery NonCF Pieces
Total Enterprise	504	18,674	99%	98.3	88%	\$3,878,213	4,434,967	2,237	4,434,875	82,815
Total AG	0	23,870	98%	N/A	N/A	\$378,345	268,753	0	268,753	6,415
Cylinder Division (AE)	0	24,571	98%	N/A	N/A	\$238,056	96,291	0	96,291	2,366
Harvester (AE)	0	23,478	98%	N/A	N/A	\$140,289	172,462	0	172,462	4,049
Total CED	474	54,601	95%	99.1	88%	\$2,670,826	413,201	196	413,194	22,561
Davenport (AE)	474	54,601	95%	99.1	88%	\$2,670,826	413,201	196	413,194	22,561
Total DPSG	544	14,346	99%	98.1	87%	\$829,042	3,753,013	2,041	3,752,928	53,839
Waterloo Engine (AE)	544	14,346	99%	98.1	87%	\$829,042	3,753,013	2,041	3,752,928	53,839

JD CROP



SupplyNETWORK
JD CROP

Supplier Summary
Friday, 20-Aug-1999 08:07:41 CDT

[Help](#)

Select a page ...

Displays the JD Crop summary for a year.

Supplier:	0002666 TEST SUPPLIER	Fiscal Year:	1999
-----------	--------------------------	--------------	------

Submit

Messages: Inquiry Successful [?](#)

Supplier Summary

Unit	Received	Carried Over	Approved	Declined	In Process	\$ In Process	\$ Submitted	\$ Approved	1999 Purchased Dollars*	% Submitted	% Approved
Davenport	0	0	0	0	0	\$0	\$0	\$0	\$1,786,587	0.00	0.00
Harvester	21	0	8	0	13	\$791,376	\$1,167,728	\$376,920	\$4,025,733	29.01	9.36
Cylinder Division	1	0	1	0	0	\$0	\$279	\$279	\$173,029	0.16	0.16
Torreon Engine	0	0	0	0	0	\$0	\$0	\$0	\$308	0.00	0.00
Waterloo	1	0	1	0	0	\$0	\$391,158	\$391,158	\$10,092,826	3.88	3.88
Waterloo Engine	1	0	0	0	1	\$2,500	\$2,500	\$0	\$1,600,000	0.16	0.00
Dubuque	2	0	2	0	0	\$0	\$427,812	\$427,812	\$4,286,174	9.98	9.98
Dubuque Engine	1	0	1	0	0	\$0	\$974	\$974	\$200,000	0.49	0.49
Welland	0	0	0	0	0	\$0	\$0	\$0	\$999,926	0.00	0.00
Total	27	0	13	0	14	\$793,876	\$1,990,451	\$1,197,143	\$23,164,583	8.59	5.17

*Disclaimer: Values are based on annual forecasted dollars, they are subject to change.

*Supply Chain Management
at
John Deere*

Art Rowe

*Project Manager, Supply Management Human Resources
Worldwide Supply Management
Deere & Company*



JOHN DEERE